

# POWER CONTROL FOR ACTIVE LINK QUALITY PROTECTION IN CDMA NETWORKS

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## ABSTRACT OF THE DISCLOSURE

The present invention relates to a system and method for dynamically limiting the power of all users of a CDMA digital data link to maximize throughput and reduce interference among users of the link. In the operation of the data link, the maximum power available from each user of the link is determined along with the minimum power needed from each user to meet its link service requirement, that is, quality of service and frame error rate requirements. The maximum to minimum power ratio is derived for each user and the lowest power ratio, that is, the power ratio closest to unity is selected and used to scale upward the minimum power levels of all users of the data link. The resulting power level establishes the interference margin or slack available for all users of the data link and the interference slack available for new users to be admitted to the data link.